

CLAIMS

1. Elevator system in tall buildings, said system comprising at least one first elevator shaft (13), which houses an elevator arranged to stop at floors called transfer levels (8, 8a), and at least one second elevator shaft (14), which houses elevators whose elevator cars (22) are disposed one above the other in the elevator shaft, which elevator cars are designed to stop during their travel at any floor to which or from which a call has been issued, **characterized** in that the second elevator shaft (14) is divided vertically into local shafts (17, 18, 19) situated one above the other, the number of which is at least one for each zone between transfer levels (8, 8a).
2. Elevator system according to claim 1, **characterized** in that the elevators in the local shafts (17, 18, 19) are arranged to travel one above the other in the same shaft in such manner that they have their paths in shaft spaces disposed one above the other so that each elevator travels between the highest and lowest floors of its own local shaft (17, 18, 19), and that, except for the topmost elevator, the highest floor for each elevator is the next floor below the lowest floor for the elevator immediately above it.
3. Elevator system according to claim 1 or 2, **characterized** in that each local shaft (17, 18, 19) contains at least an elevator car (22) traveling in the shaft and the required elevator ropes (24).
4. Elevator system according to claim 1, 2 or 3, **characterized** in that, in addition to the elevator car and hoisting ropes, each local shaft (17, 18, 19) contains an elevator machine (23) driving the elevator and a counterweight (28).
5. Elevator system according to claim 3 or 4, **characterized** in that the elevator car (22), elevator ropes (24) and counterweight (28) in each local shaft (17, 18, 19) are fitted to

operate within the area of their own local shaft only..

6. Elevator system according to any one of the preceding claims, **characterized** in that the elevator machine (23) of the
5 elevator operating in each local shaft (17, 18, 19) is mounted in the upper part of the shaft space near the upper end of the local shaft (17, 18, 19).

7. Elevator system according to any one of the preceding
10 claims, **characterized** in that the elevator machine (23) in the local shaft (17, 18, 19) is mounted in the space between the elevator car (22) traveling in the shaft and a shaft wall.

8. Elevator system according to any one of the preceding
15 claims, **characterized** in that each transfer level (8, 8a) comprises an upper and a lower transfer floor so that each lower transfer floor is the highest floor for the elevator car (22) operating in the local shaft (17, 18) that arrives at it and departs from it in downward direction, and that each upper
20 transfer floor is the lowest floor for the elevator car (22) operating in the local shaft (18, 19) that arrives at it and departs in the upward direction.

9. Elevator system according to any one of the preceding
25 claims, **characterized** in that the elevator shaft is provided with a supporting structure (25) placed between the local shafts (17, 18, 19) and so implemented that it forms a shaft bottom for the elevator immediately above it and separates from each other the local shafts (17, 18, 19) situated one
30 above the other.

10. Elevator system according to claim 9, **characterized** in that the supporting structure (25) is so positioned between the local shafts (17, 18, 19) situated one above the other
35 that, when the elevator car (22) is at its highest position, a free space of sufficient height between the supporting structure and the elevator car (22) remains in the upper part of

the lower shaft, and that when the elevator car (22) is at its lowest position, a free space of sufficient height between the supporting structure and the elevator car (22) remains in the lower part of the upper shaft.